HL7Kit Pro Query Example

This example demonstrates the use of HL7Kit Pro for sending hl7 query messages and processing the results.

The event type is QRY^A19.

# Package Content

The Archive (Zip) includes the following files

qry\_demo\_createDB.sql - Database creation script

qry\_demo\_insertData.sql - Data insertion script

qry\_mapping\_test.HL7KIT - HL7Kit mapping definition file

qrya19.hl7 - The hl7 message created by this example

# Introduction

This example has three parts:

1. Create an outgoing QRY^A19 message and test it using the mapping application
2. Process an incoming ADR^A19 message and test it using the mapping application
3. Test the complete process using the runtime service and the receiver application

# Part 1: Outbound Test

Unpack the zip file

In SQL Server Management Studio, open the SQL script file qry\_demo\_createDB.sql and run it.

This will create a new database called HL7DEMO\_QRY.

Verify that the database exists and that there are three tables in it:

* MESSAGES
* PATIENTS
* QUERY\_DEFINITION

In SQL Server Management Studio, open the SQL script file hl7demo\_insertData.sql and run it.

This will fill HL7DEMO\_QRY Database table with data of one message.

Verify that the tables MESSAGES and QUERY\_DEFINITION each have one record in them.

Double-click qry\_mapping\_test.HL7KIT. This will open the mapping file in the HL7Mapper application.

If you have not registered your application yet, click "Evaluate" in the registration form to continue.

You may receive an error message because the database connection is not set. If the configuration screen didn't open first, from the Menu bar select "Configuration".

Configure the connection string to connect to the HL7DEMO\_QRY database. If you are using SQLEXPRESS the connection string should be similar to this:

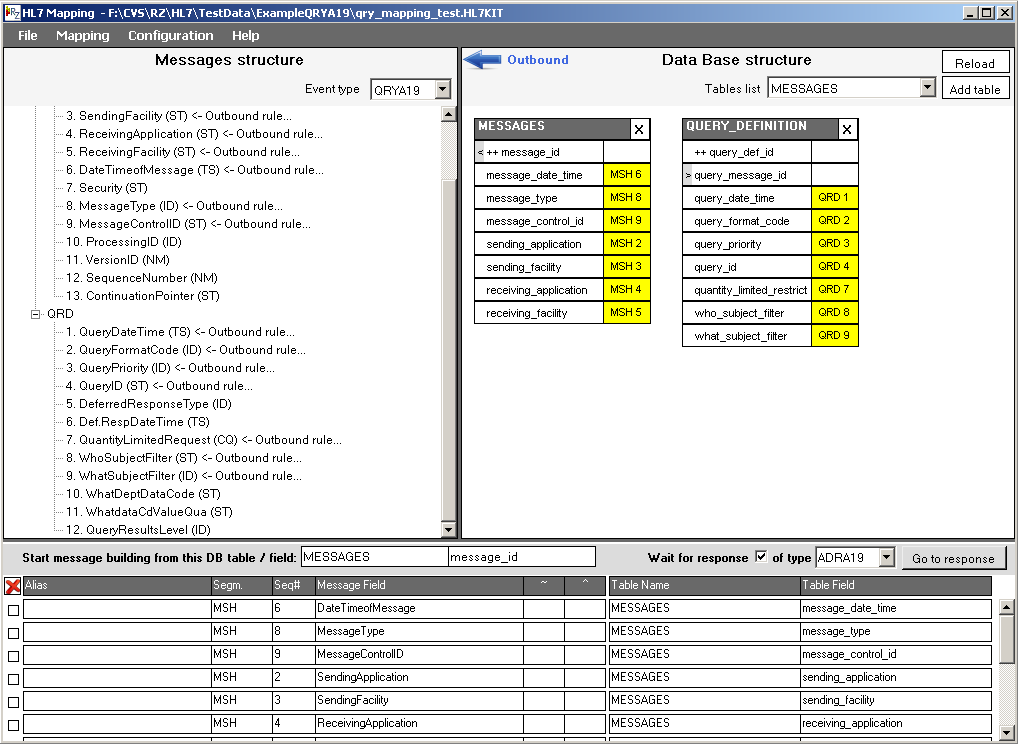
Data Source=.\sqlexpress;Initial Catalog=HL7DEMO\_QRY;integrated security=SSPI

To verify the database connection, click the “check connection” button.

Click the "HL7 QUEUE" salmon colored bar to create the HL7\_QUEUE table.

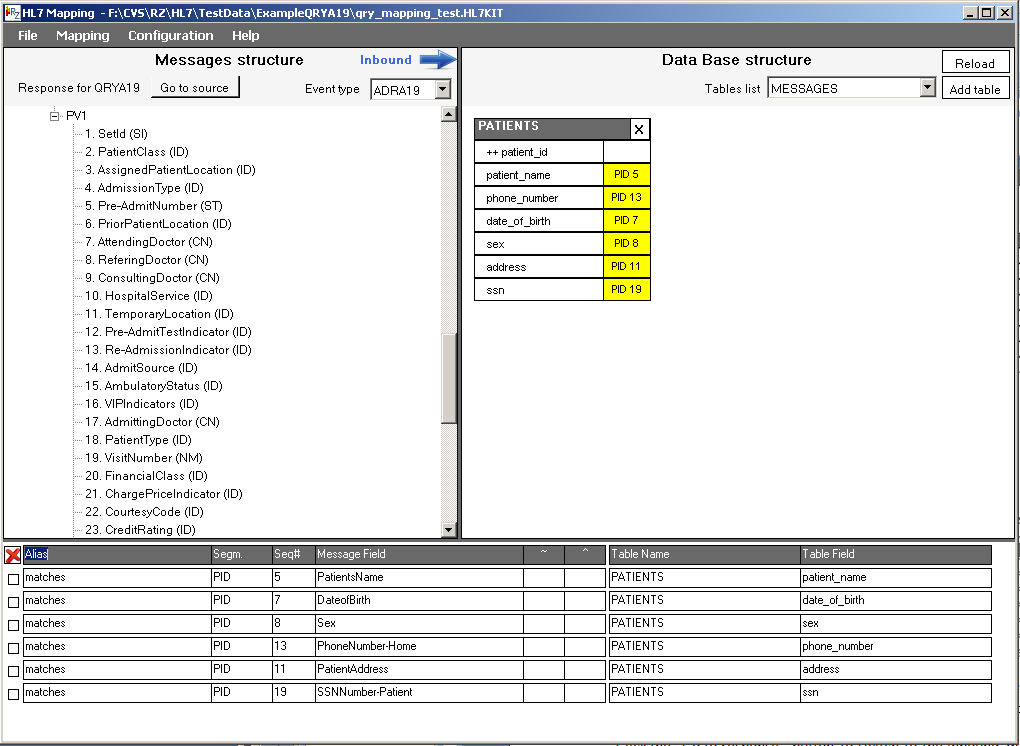
Click on "Save".

You should see the following screen



The Wait for response of type checkbox and drop-box are used to notify the kit that instead of waiting for an ACK message, a different response is expected, in this case ADR^A19 query results message.

Click the “Go to response” button to switch to the inbound mapping of ADR^A19. You should see the following screen:



The inbound mapping is set to process every PID record in the response and fill the Patients Table.

Click the “Go to source” button to go back to the query request mapping.

To test the mapping, from the menu bar select Mapping->Outbound Test

Set the value of the MESSAGES | message\_id text box to 1. And click “Start Test”.

The following HL7 message should be created:

MSH|^~\&|Sending test|Sending test facility|Receiving test|Receiving test facility|20120906112615.000|SECURITY|QRY^A19|12345||2.5.1|||

QRD|20120906112615.000|R|I|123|||1^RD|2295044|DEM||||

10) Click "Save to file" to store message as file on hard disk (for example QRYA19.hl7).

# Part 2: Test the inbound mapping

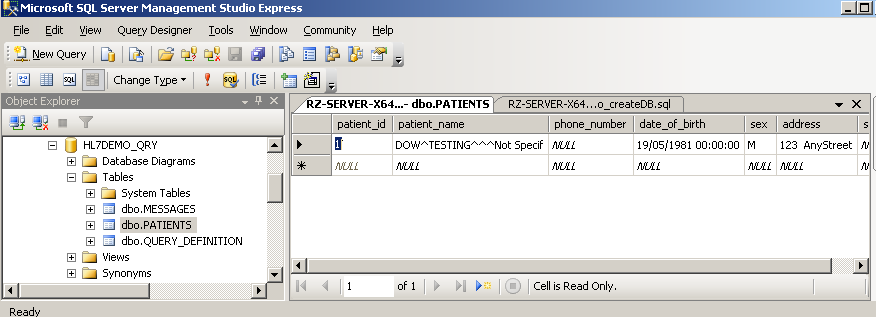
In this part we’ll check that the inbound mapping of the query response are working properly.

You should be in the inbound mapping of the HL7 Mapper.

From the menu bar select Mapping->Inbound Test

Open the ADRA19.hl7 file. You should see a “Test Completed” message box. Click OK.

Open the database and verify that a new record was created in PATIENTS table.



# Part 3: Testing the complete process using the HL7 Service and the HL7 Receiver

In this part we will use the HL7 Receiver to mimic a HL7 Query server by setting an override constant response to any HL7 message.

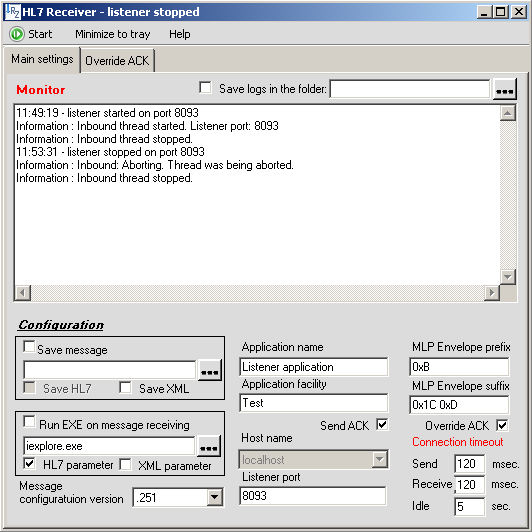
Start the HL7 Receiver. By default the receiver starts listening.

On the menu bar, click the Stop button.

Check the Override ACK checkbox. The Override ACK tab will appear.

Click the Override ACK tab and use the browse button to open the ADRA19.hl7 file from this example archive.

On the menu bar Click Start.



In the HL7 Mapper, from the menu bar select Mapping->switch to outbound mapping.

From the menu bar select Mapping->Create Trigger. This will create a database trigger on MESSAGES table that creates a new HL7\_QUEUE record whenever a new MESSAGE record is created.

Open the Runtime Service Configuration Panel.

Verify that the service configuration matches the receiver configuration:

* Change connection string so it points to HL7DEMO\_QRY Data Base.
* Click the browse button and select the mapping file from the example folder.
* Start/restart the service.
* Verify that the remote application port matches the HL7 Receiver port (default is 8095)

In SQL Server Management Studio, open the SQL script file hl7demo\_insertData.sql and run it. This will create new records in MESSAGES and QUERY\_DEFINITIONS table and fire the trigger to create a new HL7\_QUEUE record.

Wait until the poll time seconds of the service elapse and than verify that the message was received by the HL7Receiver Application.

In SQL Server Management Studio, open the PATIENTS table and verify that a new record was created.

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